

**[0066]** Certain aspects of the embodiments include process steps and instructions described herein in the form of an algorithm. It should be noted that the process steps and instructions of the embodiments could be embodied in software, firmware or hardware, and when embodied in software, could be downloaded to reside on and be operated from different platforms used by a variety of operating systems. The embodiments can also be in a computer program product which can be executed on a computing system.

**[0067]** The embodiments also relates to an apparatus for performing the operations herein. This apparatus may be specially constructed for the purposes, e.g., a specific computer, or it may comprise a general-purpose computer selectively activated or reconfigured by a computer program stored in the computer. Such a computer program may be stored in a computer readable storage medium, such as, but is not limited to, any type of disk including floppy disks, optical disks, CD-ROMs, magnetic-optical disks, read-only memories (ROMs), random access memories (RAMs), EPROMs, EEPROMs, magnetic or optical cards, application specific integrated circuits (ASICs), or any type of media suitable for storing electronic instructions, and each coupled to a computer system bus. The memory/storage can be transitory or non-transitory. Memory can include any of the above and/or other devices that can store information/data/programs. Furthermore, the computers referred to in the specification may include a single processor or may be architectures employing multiple processor designs for increased computing capability.

**[0068]** The algorithms and displays presented herein are not inherently related to any particular computer or other apparatus. Various general-purpose systems may also be used with programs in accordance with the teachings herein, or it may prove convenient to construct more specialized apparatus to perform the method steps. The structure for a variety of these systems will appear from the description below. In addition, the embodiments are not described with reference to any particular programming language. It will be appreciated that a variety of programming languages may be used to implement the teachings of the embodiments as described herein, and any references below to specific languages are provided for disclosure of enablement and best mode.

**[0069]** In addition, the language used in the specification has been principally selected for readability and instructional purposes, and may not have been selected to delineate or circumscribe the inventive subject matter. Accordingly, the disclosure of the embodiments is intended to be illustrative, but not limiting, of the scope of the embodiments, which are set forth in the claims.

**[0070]** Upon reading this disclosure, those of skill in the art will appreciate still additional alternative methods and systems for performing a gesture-based POI search. Thus, while particular embodiments and applications of the present invention have been illustrated and described, it is to be understood that the invention is not limited to the precise construction and components disclosed herein and that various modifications, changes and variations which will be apparent to those skilled in the art may be made in the arrangement, operation and details of the method and apparatus of the present invention disclosed herein without

departing from the spirit and scope of the invention as defined in the appended claims.

**1-20.** (canceled)

**21.** A vehicle-based computer-implemented method for controlling a component of the vehicle, the method comprising:

receiving, via a sensor within the vehicle, a first selecting input from a user inside the vehicle, wherein the first selecting input is a first directional gesture performed by the user;

processing the first selecting input to identify and select a first component of the vehicle to be controlled by the user;

providing, to the user, a first feedback signal confirming selection of the first component to be controlled;

subsequent to providing the first feedback signal, receiving in a capture region inside the vehicle, a first data signal for controlling the first component, wherein the first data signal is a second directional gesture that is directed at the first component; and

processing the first data signal to determine a first command for controlling the first component.

**22.** The method of claim 21, wherein:

capturing, using a camera system including one or more cameras, the directional gestures performed in the capture region inside the vehicle;

the first selecting input comprises the first directional gesture directed at the first component; and

processing the first selecting input comprises performing gesture recognition on the first directional gesture to identify the first component of the vehicle,

wherein performing gesture recognition on the first directional gesture includes determining a position of a hand of the user, a plane representing an orientation of the hand of the user, and an angle at which each joint of the hand of the user is bent.

**23.** The method of claim 21, wherein:

detecting, using a microphone, voice signals within the vehicle;

the first selecting input comprises a voice signal that includes a name of the first component; and

processing the first selecting input comprises performing voice recognition on the voice signal to identify the first component of the vehicle.

**24.** The method of claim 21, wherein:

the first feedback signal is an audio feedback signal provided through one or more speakers inside the vehicle; and

the audio feedback signal contains a name of the first component and includes audio instructions for controlling the first component.

**25.** The method of claim 21, wherein:

the first feedback signal is a visual feedback signal provided through one or more displays inside the vehicle; and

the visual feedback signal contains a name or an image of the first component and includes textual, graphical, or animation instructions for controlling the first component.

**26.** The method of claim 21, further comprising:

subsequent to providing the first feedback signal, providing the user a prompt to verify whether the first component was correctly selected based on the first selecting input.